

1 CLAIMS

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3 What is claimed is:

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5 *Sub 1* 1. A catheter balloon material formed from a blend of polymeric components, comprising:

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7 approximately 50-95% by weight of the total blend of a first urethane polymeric
8 component, said first urethane polymer having a glass transition temperature in the range
9 of -37 to 10 degrees C, and about 5-50% by weight of the total blend composition of a
10 second urethane polymer component having a glass transition temperature in the range of
11 20 to 31 degrees C.

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13 2. The catheter balloon material as recited in Claim 1, wherein using said blend in fabricating
14 a catheter balloon results in a compliant balloon.

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16 *Sub 2* 3. The catheter balloon material as recited in Claim 1, wherein said blend has a blended glass
17 temperature in the range of 22 to 26 degrees C.

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19 *Sub 3* 4. The catheter balloon material as recited in Claim 2, where said compliant balloon expands
20 its nominal diameter equal to or greater than 20% when internal pressure is increased to its rated
21 burst pressure.
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Sub 001
5. A catheter balloon material formed from a blend of polymeric components, comprising:

approximately 70-90% by weight of the total blend of a first urethane polymeric component, said first urethane polymer having a glass transition temperature in the range of 0 to 10 degrees C, and about 10-30% by weight of the total blend composition of a second urethane polymer component having a glass transition temperature in the range of 55 to 70 degrees C.

6. The catheter balloon material as recited in Claim 5, wherein using said blend in fabricating a catheter balloon results in a semi-compliant balloon.

7. The catheter balloon material as recited in Claim 5, wherein said blend comprises a blended glass temperature in the range of 26 to 42 degrees C.

Sub 002
8. The catheter balloon material as recited in Claim 6, where said compliant balloon expands its nominal diameter between 9 to 20% when internal pressure is increased to its rated burst pressure.

9. A catheter balloon material formed from a blend of polymeric components, comprising:

approximately 15-30% by weight of the total blend of a first urethane polymeric component, said first urethane polymer having a glass transition temperature in the range of 0 to 10 degrees C, and about 70-85% by weight of the total blend composition of a

1 second urethane polymer component having a glass transition temperature in the range of
2 65 to 100 degrees C.

Sub 623
4 10. The catheter balloon material as recited in Claim 9, wherein using said blend in fabricating
5 a catheter balloon results in a non-compliant balloon.

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8 11. The catheter balloon material as recited in Claim 9, wherein said blend comprises a
8 blended glass temperature in the range of 43 to 90 degrees C.

Sub 623
10 12. The catheter balloon material as recited in Claim 10, where said compliant balloon expands
11 its nominal diameter less than or equal to 9% when internal pressure is increased to its rated
12 burst pressure.

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14 13. A catheter balloon material formed from a blend of polymeric components, comprising:

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16 approximately 50-95% by weight of the total blend of a first urethane polymeric
17 component, said first urethane polymer having a Shore D Hardness in the range of 45 to
18 70, and about 5-50% by weight of the total blend composition of a second urethane
19 polymer component having a Shore D Hardness in the range of 54 to 78.

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21 14. The catheter balloon material as recited in Claim 13, wherein using said blend in
22 fabricating a catheter balloon results in a compliant balloon.

1 15. The catheter balloon material as recited in Claim 14, where said compliant balloon expands
2 its nominal diameter equal to or greater than 20% when internal pressure is increased to its rated
3 burst pressure.

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5 16. A catheter balloon material formed from a blend of polymeric components, comprising:
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7 approximately 70-90% by weight of the total blend of a first urethane polymeric
8 component, said first urethane polymer having a Shore D Hardness in the range of 55 to
9 75, and about 10-30% by weight of the total blend composition of a second urethane
10 polymer component having a Shore D Hardness in the range of 70 to 85.

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12 17. The catheter balloon material as recited in Claim 16, wherein using said blend in
13 fabricating a catheter balloon results in a semi-compliant balloon.
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15 18. The catheter balloon material as recited in Claim 17, where said compliant balloon expands
16 its nominal diameter between 9 to 20% when internal pressure is increased to its rated burst
17 pressure.
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19 19. A catheter balloon material formed from a blend of polymeric components, comprising:
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21 approximately 15-30% by weight of the total blend of a first urethane polymeric
22 component, said first urethane polymer having a Shore D Hardness in the range of 70 to
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85, and about 70-85% by weight of the total blend composition of a second urethane polymer component having a Shore D Hardness in the range of 75 to 87.

20. The catheter balloon material as recited in Claim 19, wherein using said blend in fabricating a catheter balloon results in a non-compliant balloon.

21. The catheter balloon material as recited in Claim 20, where said compliant balloon expands its nominal diameter less than or equal to 9% when internal pressure is increased to its rated burst pressure.